

## INFORMATION DISCLOSURE CITATION

(Use several sheets if necessary)

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13584 USSERIAL NO.  
10/773,941

Millennium Inorganic Chemicals, Inc.

FILING  
February 6, 2004GROUP  
to be assigned

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
JW	5,252,316	10/12/1993	Kriechbaum et al.			
JW	5,786,294	7/28/1998	Sachtler et al.			
JW	6,030,914	2/29/2000	Matsui			
JW	US 2001/0036437	12/1/2001	Gutsch et al.			
JW	6,511,642	1/28/2003	Hatanaka et al.			
JW	US 2003/0125417	7/3/2003	Vanier et al.			

## FOREIGN PATENT DOCUMENTS

	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
						YES	NO
JW	EP 0 517 437	26/03/1997	EPO				
JW	WO 99/59754	25/11/1999	WIPO				
JW	WO 00/24676	4/05/2000	WIPO				
JW	WO 02/12123	14/02/2002	WIPO				

## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

JW		Yoldas, B., "Zirconium Oxides Formed by Hydrolytic Condensation of Alkoxides and Parameters That Affect Their Morphology," Journal of Materials Science, 21, pp. 1080-1086 (1986).
JW		Caruso, et al., "ZrO <sub>2</sub> Phase Structure in Coating Films and Powders Obtained by Sol-Gel Process," Journal of Sol-Gel Science and Technology, 3, pp. 241-247 (1994).

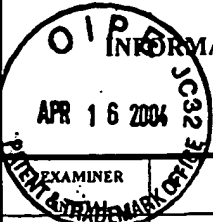
EXAMINER

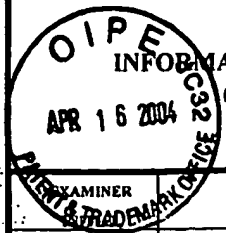
Timothy C Vanoy

DATE CONSIDERED

Feb 21 2006

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<div style="text-align: center;">  <p><b>INFORMATION DISCLOSURE CITATION</b> (Use several sheets if necessary)</p> </div>		Docket Number (Optional) <b>13584 US</b>	Application Number <b>10/773,941</b>
		Applicant(s) <b>Millennium Inorganic Chemicals, Inc.</b>	
		Filing Date <b>February 6, 2004</b>	Group Art Unit <b>To be assigned</b>
		<b>OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)</b>	
<i>JW</i>		Moon, et al., "Preparation of Monodisperse and Spherical Zirconia Powders by Heating of Alcohol-Aqueous Salt Solutions," J. Am. Ceram. Soc., 78[10], pp. 2690-2694 (1995).	
<i>JW</i>		Matsui, et al., "Raman Spectroscopic Studies on the Formation Mechanism of Hydrous-Zirconia Fine Particles," J. Am. Ceram. Soc., 78[1], pp. 146-152 (1995).	
<i>JW</i>		Matsui, et al., "Formation Mechanism of Hydrous-Zirconia Particles Produced by Hydrolysis of ZrOCl <sub>2</sub> Solutions," J. Am. Ceram. Soc., 80[8], pp. 1949-1956 (1997).	
<i>JW</i>		Rivas, et al., "Evolution of the Phase Content of Zirconia Powders Prepared by Sol-Gel Acid Hydrolysis," J. Am. Ceram. Soc., 81[1], pp. 200-204 (1998).	
<i>JW</i>		Helble, J., "Combustion Aerosol Synthesis of Nanoscale Ceramic Powders," J. Aerosol Sci., vol. 29, No. 5/6, pp. 721-736 (1998).	
<i>JW</i>		Hu et al., "Nanocrystallization and Phase Transformation in Monodispersed Ultrafine Zirconia Particles from Various Homogeneous Precipitation Methods," J. Am. Ceram. Soc., 82[9], pp. 2313-2320 (1999).	
<i>JW</i>		"Influence of Some Parameters on the Synthesis of ZrO <sub>2</sub> Nanoparticles by Heating of Alcohol-Aqueous Salt Solutions," Journal of Nanoparticle Research, 1:349-352 (1999).	
<i>JW</i>		Xia et al., "ZrO <sub>2</sub> Nanopowders Prepared by Low-Temperature Vapor-Phase Hydrolysis," J. Am. Ceram. Soc., 83[5], pp. 1077-1080 (2000).	
<i>JW</i>		Matsui, et al., "Formation Mechanism of Hydrous-Zirconia Particles Produced by Hydrolysis ZrOCl <sub>2</sub> Solutions: II," J. Am. Ceram. Soc., 83[6], pp. 1386-1392 (2000).	
<i>JW</i>		Matsui, et al., "Formation Mechanism of Hydrous Zirconia Particles Produced by the Hydrolysis of ZrOCl <sub>2</sub> Solutions: III, Kinetics Study for the Nucleation and Crystal-Growth Processes of Primary Particles," J. Am. Ceram. Soc., 84[10], pp. 2303-2312 (2001).	
<i>JW</i>		Matsui, et al., "Formation Mechanism of Hydrous of Zirconia Particles Produced by Hydrolysis of ZrOCl <sub>2</sub> Solutions: IV, Effects of ZrOCl <sub>2</sub> Concentration and Reaction Temperature," J. Am. Ceram. Soc., 85[3], pp. 545-553 (2002).	
<i>JW</i>		Limaye, et al., "Morphological Control of Zirconia Nanoparticles Through Combustion Aerosol Synthesis," J. Am. Ceram. Soc., 85[7], pp. 1127-1132 (2002).	
EXAMINER <i>Timothy C Vandy</i>		DATE CONSIDERED <i>Feb 21 2006</i>	
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## INFORMATION DISCLOSURE CITATION

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Docket Number (Optional)

13584 US

Application Number

10/773,941

Applicant(s)

Millennium Inorganic Chemicals, Inc

Filing Date

February 6, 2004

Group Art Unit

To be assigned

## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

jav... Deng, et al., "New Hydrolytic Process for Producing Zirconium Dioxide, Tin Dioxide, and Titanium Dioxide Nanoparticles," J. Am. Ceram. Soc., 85[11], pp. 2837-2839 (2002).

jav Xie, Y., "Preparation of Ultrafine Zirconia Particles," J. Am. Ceram. Soc., 82[3], pp. 768-770 (1999).

jav Burton, et al., "Optimisation of the Preparation of Ceria/Zirconia Mixed Oxides by a Statistical Approach," [www.zrchem.com/frames.html](http://www.zrchem.com/frames.html), undated, downloaded December 11, 2003.

jav "General Data Sheets on Zirconium Catalyst Products," [www.zrchem.com/catalysisprods.html](http://www.zrchem.com/catalysisprods.html), undated, downloaded January 5, 2004.

"Zirconium Compounds in Catalysts," [www.zrchem.com](http://www.zrchem.com), November/December 1992.

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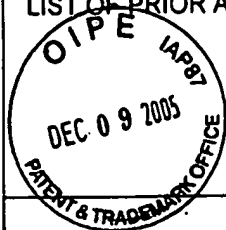
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		Page 1 of 1
Form PTO-1449 U.S. Department of Commerce Patent and Trademark Office Rev. 7/89		Attorney Docket: 44-13584
		Examiner: Unknown
		Serial No. 10/773,941
LIST OF PRIOR ART CITED BY APPLICANT		Filing Date: 02/06/2004
		Group Art: 1754
		Date: December 6, 2005
		Applicant: Guoyi Fu, et al.
		FOR: Nano-Structured Particles With High Thermal Stability



### U.S. PATENT DOCUMENTS

Examiner Initial		Document Number	Date	Name	Class	Subclass	Filing Date if appropriate
	AA						
	AB						
	AC						
	AD						
	AE						
	AF						
	AG						
	AH						
	AI						
	AJ						
	AK						

### FOREIGN PATENT DOCUMENTS

			DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
							YES	NO
	AL							
	AM							
	AN							
	AO							

### OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)

JW	AP	Zhang, Y. et al., "Mesoporous structure and phase transition of nanocrystalline TiO <sub>2</sub> ", <u>Materials Letters</u> , Vol. 54, (2002), pages 375-381.
JW	AQ	Seo, D-S, et al., "Effect of aging agents on the formation of TiO <sub>2</sub> nanocrystalline powder", <u>Materials Letters</u> , Vol. 51, (2001), pages 115-119.
JW	AR	Kundakovic, L. J., et al., "Cu- and Ag-modified cerium oxide catalysts for methane oxidation", <u>Journal of Catalysts</u> , Vol. 179, (1998), pages 203-221.

Examiner <i>Timothy C Vanoy</i>	Date Considered <i>Feb 21 2006</i>
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